

ABSTRACT

The present invention relates to a method of forming a 3-D inductor using RF-MEMS. According to the present invention, an inductor may be formed by depositing copper by means of a spin-on force fill method using a solution containing nano-scale copper particles or copper precursors without
5 depositing an anti-diffusion film or a seed layer, performing a baking process, and then burying copper by means of a spin-on force fill method including performing an annealing process. A 3-D inductor may be formed by forming a given first metal layer pattern, plating a copper layer to form an air gap
10 bridge, forming a second metal layer pattern on the air gap bridge, plating a copper layer to form an inductor, and then removing the first and second metal layer patterns.